WHAT IS CLAIMED IS:

1. A wavelength selective optical device comprising:

a first graded index rod lens having a first end surface thereof on which a divergent light is incident, and a second end surface thereof from which a parallel light beam is emitted; and

an optical filter arranged to face to the second end surface of the first graded index rod lens so that the parallel light beam emitted from the first graded index rod lens is incident on the optical filter;

wherein a refractive index distribution constant of the first graded index rod lens is adjusted such that a wavelength range of the light which is reflected or transmitted by the optical filter is tuned within a desired range.

2. A wavelength selective optical device according to claim 1, wherein the optical filter is a multi-layered optical interference filter, and

the refractive index distribution constant of the first graded index rod lens is adjusted such that a representative wavelength of the light reflected or transmitted by the optical filter is tuned within a desired range.

3. A wavelength selective optical device according to claim 1, wherein the optical filter is formed directly on the second

end surface of the first graded index rod lens as a film.

4. A wavelength selective optical device, according to claim 1, further comprising a cylindrical member wherein the first graded index rod lens is inserted from one end portion of the cylindrical member so that the first graded index rod lens is fitted without clearance to the cylindrical member, and the optical filter is provided on another end portion of the cylindrical member.

5. A wavelength selective optical device according to claim 1, wherein the first graded index rod lens is selected among a plurality of graded index rod lens groups having various different refractive index distribution constants.

6. A wavelength selective optical device comprising:

a first optical fiber in which optical signals with a plurality of multiplexed wavelengths is propagated;

a first graded index rod lens having a first end surface thereof on which a light emitted from an end surface of the first optical fiber is incident, and a second end surface thereof from which a parallel light beam is emitted;

an optical filter arranged to face to the second end surface of the first graded index rod lens so that the parallel light beam emitted from the first graded index rod lens is

incident on the optical filter; and

a second optical fiber arranged on a side of the first end surface of the first graded index rod lens to which a light reflected by the optical filter is coupled though the first graded index rod lens;

wherein a refractive index distribution constant of the first graded index rod lens is adjusted such that a wavelength range of the light reflected by the optical filter is tuned within a desired range.

7. A wavelength selective optical device according to claim 6, further comprising a second graded index rod lens having a first end surface thereof facing to the optical filter, and

a third optical fiber arranged on a side of a second end surface of the second graded index rod lens to which a light transmitted from the optical filter is coupled though the second graded index rod lens.

8. A wavelength selective optical device according to claim 6, wherein the optical filter is a multi-layered optical interference filter, and

the refractive index distribution constant of the first graded index rod lens is adjusted such that a representative wavelength of the light reflected by the optical filter is tuned within a desired range.

9. A wavelength selective optical device according to claim 6, wherein the optical filter is formed directly on the second end surface of the first graded index rod lens as a film.

10. A wavelength selective optical device, according to claim 6, further comprising a cylindrical member wherein the first graded index rod lens is inserted from one end portion of the cylindrical member so that the first graded index rod lens is fitted without clearance to the cylindrical member, and the optical filter is provided on another end portion of the cylindrical member.

11. A wavelength selective optical device according to claim 6, wherein the first graded index rod lens is selected among a plurality of graded index rod lens groups having various different refractive index distribution constants.

12. A wavelength selective optical device comprising:

a first optical fiber in which optical signals with a plurality of multiplexed wavelengths is propagated;

a first graded index rod lens having a first end surface thereof on which a light emitted from an end surface of the first optical fiber is incident, and a second end surface thereof from which a parallel light beam is emitted;

an optical filter arranged to face to the second end surface of the first graded index rod lens so that the parallel light beam emitted from the first graded index rod lens is incident on the optical filter;

a second graded index rod lens having a first end surface thereof facing to the optical fiber; and

a second optical fiber arranged on a side of a second end surface of the second graded index rod lens to which a light transmitted from the optical filter is coupled though the second graded index rod lens,

wherein a refractive index distribution constant of the first graded index rod lens is adjusted such that a wavelength range of the light transmitted from the optical filter is tuned within a desired range.

13. A wavelength selective optical device according to claim 12, wherein the optical filter is a multi-layered optical interference filter, and

the refractive index distribution constant of the first graded index rod lens is adjusted such that a representative wavelength of the light transmitted from the optical filter is positioned within a desired range.

14. A wavelength selective optical device according to claim 12, wherein the optical filter is formed directly on the second

end surface of the first graded index rod lens as a film.

15. A wavelength selective optical device according to claim 12, wherein the first graded index rod lens is selected among a plurality of graded index rod lens groups having various different refractive index distribution constants.

16. A method of tuning a wavelength characteristic of a wavelength selective optical device in which a divergent light is collimated and incident on an optical filter through a graded index rod lens, a predetermined wavelength range of the light incident thereon is reflected or transmitted by the optical filter, the method comprising the steps of:

changing the graded index rod lens for another graded index rod lens having a different refractive index distribution constant such that the wavelength range of the light reflected or transmitted by the optical filter is tuned within a desired range.

17. A method of tuning a wavelength characteristic of a wavelength selective optical device according to claim 16, wherein the optical filter is a multi-layered optical interference filter, and

the refractive index distribution constant of the first graded index rod lens is adjusted such that a representative

wavelength of the light reflected or transmitted by the optical filter is tuned within a desired range.

18. A method of tuning a wavelength characteristic of a wavelength selective optical device according to claim 16, wherein the optical filter is formed directly on the graded index rod lens as a film.

19. A method of tuning a wavelength characteristic of a wavelength selective optical device according to claim 16, wherein the graded index rod lens is inserted from one end portion of a cylindrical member so that the graded index rod lens is fitted without clearance to the cylindrical member, and the optical filter is provided on another end portion of the cylindrical member.

20. A method of tuning a wavelength characteristic of a wavelength selective optical device according to claim 16, wherein the graded index rod lens is selected among a plurality of graded index rod lens groups having various different refractive index distribution constants.